

WHAT IS CLAIMED IS:

1. An information terminal unit operable to capture and transmit the first information terminal unit-captured image to a second information terminal unit, the information terminal unit comprising:

an image input unit operable to capture the first information terminal unit-captured image;

a characteristic-detecting unit operable to detect characteristics from the first information terminal unit-captured image that has been captured by said image input unit, thereby generating characteristic information;

an image-encoding unit operable to encode the first information terminal unit-captured image that has been captured by said image input unit; and

an encoded information-transmitting unit operable to transmit encoded image information to said second information terminal unit, the encoded image information being produced by said image-encoding unit,

wherein said characteristic-detecting unit controls, using the characteristic information, said image-encoding unit in encoding the first information terminal unit-captured image.

2. An information terminal unit as defined in claim 1, wherein said characteristic-detecting unit is operable to change, in accordance with the characteristic information, a number of steps in encoding the first information terminal unit-captured image in said image-encoding unit.

3. An information terminal unit as defined in claim 1, wherein said characteristic-detecting unit is operable to change, in accordance with the characteristic information, a condition of a motion vector search performed by said image-encoding unit.

4. An information terminal unit as defined in claim 1, wherein said characteristic-detecting unit is operable to change, in accordance with the characteristic

information, an amount of codes to be generated for the first information terminal unit-captured image in said image-encoding unit.

5. An information terminal unit as defined in claim 1, wherein said characteristic-detecting unit is operable to change, in accordance with the characteristic information, a frame rate in encoding the first information unit-captured image in said image-encoding unit.

6. An information terminal unit operable to capture and transmit a first information terminal unit-captured image to a second information terminal unit, comprising:

- an image input unit operable to capture the first information terminal unit-captured image;

- an image-displaying unit operable to display thereon the first information terminal unit-captured image that has been captured by said image input unit;

- a characteristic-detecting unit operable to detect characteristics from the first information terminal unit-captured image that has been captured by said image input unit, thereby generating characteristic information;

- an image-encoding unit operable to encode the first information terminal unit-captured image that has been captured by said image input unit; and

- an encoded information-transmitting unit operable to transmit encoded image information to said second information terminal unit, the encoded image information being produced by said image-encoding unit,

- wherein said characteristic-detecting unit is operable to change an image-displaying pattern in said image-displaying unit in accordance with the characteristic information, the image-displaying pattern including a number of displayed images and luminance of image displaying.

7. An information terminal unit operable to receive an encoded, second information terminal unit-captured image from a second information terminal unit,

information terminal unit comprising:

an encoded information-receiving unit operable to receive the encoded, second information terminal unit-captured image;

an image-decoding unit operable to decode the encoded, second information terminal unit-captured image received by said encoded information-receiving unit, thereby producing a second information terminal unit-captured image;

a characteristic-detecting unit operable to detect characteristics from the second information terminal unit-captured image that has been produced by said image-decoding unit, thereby generating characteristic information; and

an image-displaying unit operable to display thereon the second information terminal unit-captured image that has been produced by said image-decoding unit,

wherein said characteristic-detecting unit is operable to control, using the characteristic information, a number of images to be transmitted from said image-decoding unit to said image-displaying unit, each of the images being composed of the second information terminal unit-captured image.

8. An information terminal unit as defined in claim 7, wherein said characteristic-detecting unit is operable to change an image-displaying pattern in said image-displaying unit using the characteristic information, said image-displaying pattern including a number of displayed images and luminance of image displaying.

9. An information terminal unit operable to capture and transmit a first information terminal unit-captured image to a second information terminal unit, and operable to receive and display a second information terminal unit-captured image from said second information terminal unit, information terminal unit comprising:

an image input unit operable to capture the first information terminal unit-captured image;

an image-encoding unit operable to encode the first information terminal unit-captured image that has been captured by said image input unit;

an encoded information-transmitting unit operable to transmit encoded image information to said second information terminal unit, the encoded image information being produced by said image-encoding unit;

an encoded information-receiving unit operable to receive an encoded, second information terminal unit-captured image from said second information terminal unit;

an image-decoding unit operable to decode the encoded, second information terminal unit-captured image received by said encoded information-receiving unit, thereby producing a second information terminal unit-captured image;

an image-displaying unit operable to display thereon the first and second information terminal unit-captured images, the first information terminal unit-captured image being captured by said image input unit, the second information terminal unit-captured image being produced by said image-decoding unit; and

a characteristic-detecting unit operable to detect characteristics from the first and second information terminal unit-captured images, thereby generating characteristic information, the first information terminal unit-captured image being captured by said image input unit, the second information terminal unit-captured image being produced by said image-decoding unit,

wherein said characteristic-detecting unit is operable to control, in accordance with the characteristic information, at least one of said image-encoding unit in image-encoding step, and said image-decoding unit in step of image transferring to said image-displaying unit, and said image-displaying unit in image-displaying step.

10. An information terminal unit as defined in claim 9, wherein said characteristic-detecting unit further comprises:

a plurality of characteristic detection-processing units; and

a control signal-generating unit operable to select any one of several pieces of characteristic information, thereby producing a control signal in accordance with selected characteristic information, the several pieces of characteristic information being

detected by said plurality of characteristic detection-processing units,

wherein said control signal-generating unit is operable to control, using a produced control signal, said image-encoding unit, said image-displaying unit, said image-decoding unit, and said image input unit.

11. An information terminal unit operable to capture and transmit a first information terminal unit-captured image to a second information terminal unit, information terminal unit comprising:

an image input unit operable to capture the first information terminal unit-captured image;

a characteristic-detecting unit operable to detect characteristics from the first information terminal unit-captured image that has been captured by said image input unit, thereby generating characteristic information;

an image-encoding unit operable to encode the first information terminal unit-captured image that has been captured by said image input unit;

an external input unit operable to enter external information;

a characteristic detecting step-changing unit operable to control said characteristic-detecting unit using the external information that has been entered by said external input unit into said characteristic detecting step-changing unit; and

an encoded information-transmitting unit operable to transmit encoded image information to said second information terminal unit, the encoded image information being produced by said image-encoding unit.

12. An information terminal unit operable to capture and transmit a first information terminal unit-captured image to a second information terminal unit, and operable to receive and display a second information terminal unit-captured image from said second information terminal unit, information terminal unit comprising:

an image input unit operable to capture the first information terminal unit-captured image;

an image-encoding unit operable to encode the first information terminal unit-captured image that has been captured by said image input unit;

an encoded information-transmitting unit operable to transmit encoded image information to said second information terminal unit, the encoded image information being produced by said image-encoding unit;

an encoded information-receiving unit operable to receive an encoded, second information terminal unit-captured image from said second information terminal unit;

an image-decoding unit operable to decode the encoded, second information terminal unit-captured image received by said encoded information-receiving unit, thereby producing a second information terminal unit-captured image;

an image-displaying unit operable to display thereon the first and second information terminal unit-captured images, the first information terminal unit-captured image being captured by said image input unit, the second information terminal unit-captured image being produced by said image-decoding unit;

a characteristic-detecting unit operable to detect characteristics from the first and second information terminal unit-captured images, thereby generating characteristic information, the first information terminal unit-captured image being captured by said image input unit, the second information terminal unit-captured image being produced by said image-decoding unit;

an external input unit operable to enter external information; and

a characteristic detecting step-changing unit operable to control said characteristic-detecting unit using the external information that has been captured by said external input unit into said characteristic detecting step-changing unit,

wherein said characteristic-detecting unit is operable to control, in accordance with either one of manual control and automatic control, at least one of said image-encoding unit in image-encoding step, and said image-decoding unit in step of transferring image information to said image-displaying unit, and said image-displaying

unit in image-displaying step, the manual control being driven by said external input unit, the automatic control being executed in accordance with the characteristic information generated by said characteristic-detecting unit.

13. An information terminal unit as defined in claim 1, wherein said characteristic-detecting unit controls starting and stopping characteristic detection from the first information terminal unit-captured image.

14. An information terminal unit as defined in claim 1, wherein said characteristic-detecting unit detects the characteristics by comparing the first information terminal unit-captured image captured by said image input unit with a previously prepared template.

15. An information terminal unit as defined in claim 1, wherein said characteristic-detecting unit detects the characteristics by comparing a motion vector obtained by said image-encoding unit with a previously prepared template.

16. An information terminal unit as defined in claim 1, wherein the characteristic information generated by said characteristic-detecting unit is information on a face of a user of said information terminal unit.

17. A communication method using an information terminal unit operable to capture and transmit a first information terminal unit-captured image to a second information terminal unit, the communication method comprising:

entering the first information terminal unit-captured image;

detecting characteristics from the first information terminal unit-captured image that has been captured by said entering the first information terminal unit-captured image, thereby generating characteristic information;

encoding the first information terminal unit-captured image that has been captured by said entering the first information terminal unit-captured image; and

transmitting encoded image information to said second information terminal unit, the encoded image information being produced by said encoding the first

information terminal unit-captured image,

wherein said detecting the characteristics from the first information terminal unit-captured image includes controlling, using the characteristic information, an image-encoding step in said encoding the first information terminal unit-captured image.

18. A communication method as defined in claim 17, wherein said controlling the image-encoding step in said encoding the first information terminal unit-captured image, said controlling the image-encoding step being included in said detecting the characteristics from the first information terminal unit-captured image, includes changing, in accordance with the characteristic information, either one of a number of steps in encoding the first information terminal unit-captured image, a condition of a motion vector search performed by said encoding the first information terminal unit-captured image, an amount of codes generated in said encoding the first information terminal unit-captured image, and a frame rate in said encoding the first information terminal unit-captured image.

19. A communication method using an information terminal unit operable to capture and transmit a first information terminal unit-captured image to a second information terminal unit, the communication method comprising:

entering the first information terminal unit-captured image;

displaying the first information terminal unit-captured image that has been captured by said entering the first information terminal unit-captured image;

detecting characteristics from the first information terminal unit-captured image that has been captured by said entering the first information terminal unit-captured image, thereby generating characteristic information;

encoding the first information terminal unit-captured image that has been captured by said entering the first information terminal unit-captured image; and

transmitting encoded image information to said second information terminal



unit, the encoded image information being produced by said encoding the first information terminal unit-captured image,

wherein said detecting the characteristics from the first information terminal unit-captured image includes changing, in accordance with the characteristic information, an image-displaying pattern in said displaying the first information terminal unit-captured image, the image-displaying pattern including a number of displayed images and luminance of image displaying.

20. A communication method using an information terminal unit operable to receive an encoded, second information terminal unit-captured image from a second information terminal unit, the communication method comprising:

receiving the encoded, second information terminal unit-captured image through a receiving path;

decoding the encoded, second information terminal unit-captured image to produce a second information terminal unit-captured image;

detecting characteristics from the second information terminal unit-captured image that has been produced by said decoding the encoded image information to produce the second information terminal unit-captured image, thereby generating characteristic information; and

displaying the second information terminal unit-captured image that has been produced by said decoding the encoded image information to produce the second information terminal unit-captured image,

wherein said detecting the characteristics from the second information terminal unit-captured image includes controlling, using the characteristic information, a number of images to be transmitted from an image-decoding unit to an image-displaying unit, each of the images being composed of the second information terminal unit-captured image.

21. A communication method as defined in claim 20, wherein said detecting

the characteristics from the second information terminal unit-captured image includes changing, using the characteristic information, an image-displaying pattern in said displaying the second information terminal unit-captured image, the image-displaying pattern including a number of displayed images and luminance of image displaying.

22. A communication method using an information terminal unit operable to capture and transmit a first information terminal unit-captured image to a second information terminal unit, and operable to receive and display a second information terminal unit-captured image from said second information terminal unit, the communication method comprising:

entering the first information terminal unit-captured image;

encoding the first information terminal unit-captured image that has been captured by said entering the first information terminal unit-captured image;

transmitting encoded image information to said second information terminal unit, the encoded image information being produced by said encoding the first information terminal unit-captured image;

receiving an encoded, second information terminal unit-captured image from said second information terminal unit;

decoding the encoded, second information terminal unit-captured image received by said receiving, thereby producing a second information terminal unit-captured image;

displaying the first and second information terminal unit-captured images, the first information terminal unit-captured image being captured by said entering the first information terminal unit-captured image, the second information terminal unit-captured image being produced by said decoding the encoded, second information terminal unit-captured image; and

detecting characteristics from the first and second information terminal unit-captured images, thereby generating characteristic information, the first

information terminal unit-captured image being captured by said entering the first information terminal unit-captured image, the second information terminal unit-captured image being produced by said decoding the encoded, second information terminal unit-captured image,

wherein said detecting the characteristics from the first and second information terminal unit-captured images includes controlling, in accordance with the characteristic information, at least one of an image-encoding step in said encoding the first information terminal unit-captured image, and a step of transferring the second information terminal unit-captured image produced in said decoding the encoded, second information terminal unit-captured image, and an image-displaying step in said displaying the first and second information terminal unit-captured images.

23. A communication method as defined in claim 22, wherein said detecting the characteristics from the first and second information terminal unit-captured images further comprises:

practicing a plurality of characteristic detection-processing steps; and

selecting any one of several pieces of characteristic information to produce a control signal in accordance with selected characteristic information, the several pieces of characteristic information being detected by said practicing the plurality of characteristic detection-processing steps,

wherein said selecting any one of the several pieces of characteristic information to produce the control signal in accordance with the selected characteristic information includes controlling, using the control signal, steps in said entering the first information terminal unit-captured image, steps in said encoding the first information terminal unit-captured image, steps in said decoding the encoded, second information terminal unit-captured image, and steps in said displaying the first and second information terminal unit-captured images.

24. A communication method using an information terminal unit operable to

capture and transmit a first information terminal unit-captured image to a second information terminal unit, the communication method comprising:

entering the first information terminal unit-captured image;

detecting characteristics from the first information terminal unit-captured image that has been captured by said entering the first information terminal unit-captured image, thereby generating characteristic information;

encoding the first information terminal unit-captured image that has been captured by said entering the first information terminal unit-captured image;

entering external information;

executing selective control in said detecting the characteristics from the first information terminal unit-captured image, using the external information that has been captured by said entering the external information; and

transmitting encoded image information to said second information terminal unit, the encoded image information being produced by said encoding the first information terminal unit-captured image.

25. A communication method using an information terminal unit operable to capture and transmit a first information terminal unit-captured image to a second information terminal unit, and operable to receive and display a second information terminal unit-captured image from said second information terminal unit, the communication method comprising:

entering the first information terminal unit-captured image;

encoding the first information terminal unit-captured image that has been captured by said entering the first information terminal unit-captured image;

transmitting encoded image information to said second information terminal unit, the encoded image information being produced by said encoding the first information terminal unit-captured image;

receiving an encoded, second information terminal unit-captured image from

said second information terminal unit;

decoding the encoded, second information terminal unit-captured image to produce a second information terminal unit-captured image;

displaying the first and second information terminal unit-captured images, the first information terminal unit-captured image being captured by said entering the first information terminal unit-captured image, the second information terminal unit-captured image being produced by said decoding the encoded image information to produce the second information terminal unit-captured image;

detecting characteristics from the first and second information terminal unit-captured images, thereby generating characteristic information, the first information terminal unit-captured image being captured by said entering the first information terminal unit-captured image, the second information terminal unit-captured image being produced by said decoding the encoded image information to produce the second information terminal unit-captured image;

entering external information; and

executing selective control in said detecting the characteristics from the first and second information terminal unit-captured images, using the external information that has been captured by said entering the external information,

wherein said detecting the characteristics from the first and second information terminal unit-captured images includes controlling, in accordance with either one of manual control and automatic control, at least one of an image-encoding step in said encoding the first information terminal unit-captured image, and an image information-transferring step in said decoding the encoded image information to produce the second information terminal unit-captured image, and an image-displaying step in said displaying the first and second information terminal unit-captured images, the manual control being driven by said entering the external information, the automatic control being executed in accordance with the characteristic information generated in

said detecting the characteristics from the first and second information terminal unit-captured images.

26. A communication method as defined in claim 17, wherein said detecting the characteristics from the first information terminal unit-captured image includes controlling starting and stopping of characteristic detection from the first information terminal-captured image.

27. A communication method as defined in claim 17, wherein said detecting the characteristics from the first information terminal unit-captured image includes detecting the characteristics by comparing the first information terminal unit-captured image captured by said entering the first information terminal unit-captured image with a previously prepared template.

28. A communication method as defined in claim 17, wherein said detecting the characteristics from the first information terminal unit-captured image includes detecting the characteristics by comparing a motion vector obtained by said encoding the first information terminal unit-captured image with a previously prepared template.

29. A communication method as defined in claim 17, wherein the image information detected by said detecting the characteristics from the first information terminal unit-captured image is information on a face of a user of said information terminal unit.